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Case Report

Hysteroscopic resection of cervical ectopic pregnancy: A case report

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Introduction

Cervical ectopic pregnancy is a challenging gynaecological condition for any clinician. It is defined as implantation of the blastocyst in the endocervical canal below the closed internal os and accounts for <1% of all ectopic pregnancies [1], with an incidence of 1:8600- 1:12000 of all pregnancies per year [2. Previous dilatation and curettage, previous caesarian section, use of intrauterine devices, Asherman syndrome, previous cervical or uterine surgery and in vitro fertilization treatment are some of the underlying risk factors for cervical ectopic pregnancy [3]. Patients usually present with painless vaginal bleeding after a period of amenorrhea and patients may bleed profusely, in some cases. Transvaginal ultrasound has 85% accuracy in the diagnosis of this condition [4] and the key for success is a high index of suspicion and early diagnosis and intervention.

Historically, radical treatment with hysterotomy was performed in many cases of cervical ectopic pregnancy [5s]. In the current era, we are able to manage many cases of cervical ectopic pregnancy with conservative measures like systemic or local methotrexate, local potassium chloride injection of live pregnancies, uterine artery embolization and hysteroscopic resection.

Case report

Mrs. K, a 33- year-old lady in her fourth pregnancy, presented with mild per-vaginal bleeding and lower abdominal pain of 3 days duration after a period of amenorrhea of 9 weeks. On examination, she was haemodynamically stable and minor bleeding through a closed external os was noted. She had delivered her first child vaginally 13 years previously. Her second pregnancy ended as an emergency hysterotomy at 22 weeks of gestation due to massive bleeding from a lower lying placenta. Her third pregnancy was a second trimester miscarriage at 15 weeks of gestation and was

managed surgically.

Trans-vaginal ultrasound confirmed a regular gestational sac containing a fetal pole of 9 weeks gestation below the internal os of the cervix (Figures 1 and 2). The endometrium was thickened. Both ovaries were normal and there was no free fluid. A diagnosis of cervical ectopic was made.

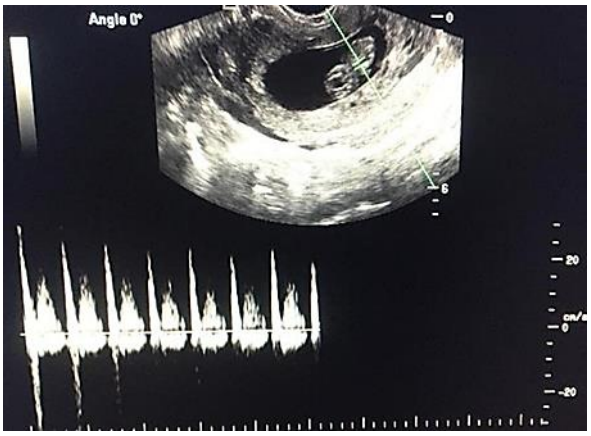


Figure 1&2: Transvaginal ultrasound on Day1: fetal pole and fetal heart beat identified below the internal os of the cervix.

Considering her bad obstetric history and serum beta hCG level, which was 133,704, we decided to manage this case with a minimally invasive method using laparoscopy-guided hysteroscopic resection with an attempt to preserve her fertility.

Three ports laparoscopy done, and diluted vasopressin (1ml in 100ml normal saline) injected at the isthmo-cervical junction under direct vision (Figure 3). Cervical ectopic pregnant tissues were resected using saline diathermy under the guidance of hysteroscopy (Figures 4-6). Bleeding from the site of the resection was controlled with ball point diathermy and a 20G Foley catheter inserted for tamponade.

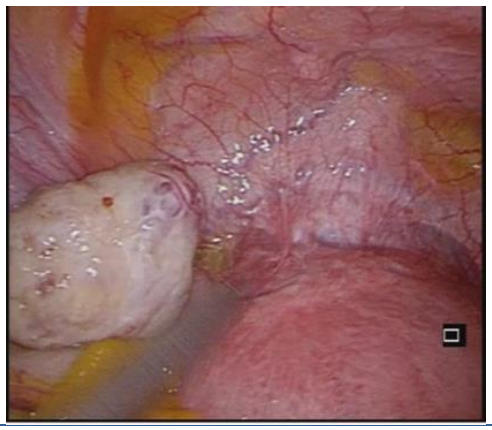
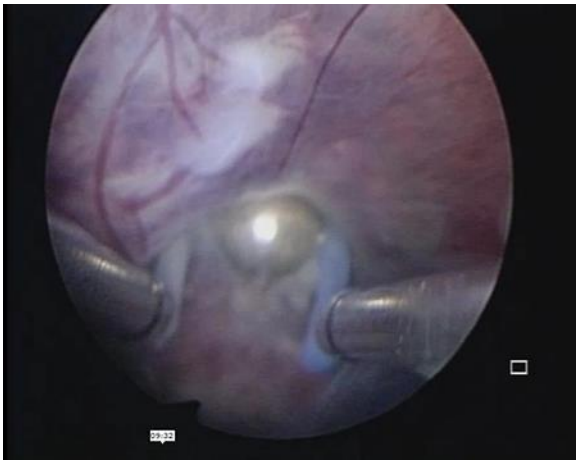


Figure 3: Laparoscopic view of isthmo- cervical junction.



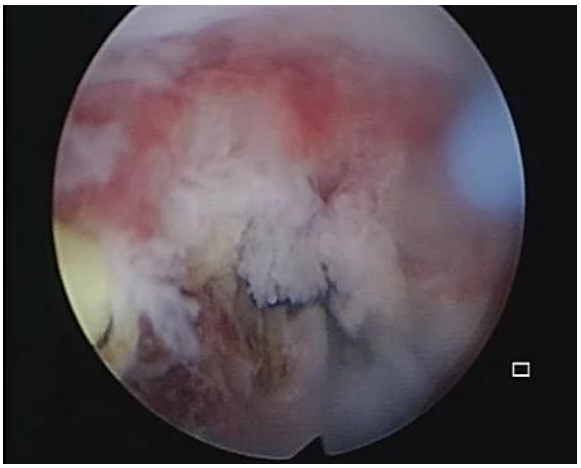


Figure 4 & 5: Hysteroscopic resection of ectopic.

Figure 6: Post procedure endometrial cavity

Figure 7: Transvaginal ultrasound of post-operative day 3 shows a small blood clot within the uterus with no evidence of free fluid in the pelvic cavity.

Her post-operative period was uncomplicated. Transvaginal ultrasound of post-operative day 3 shows a small blood clot within the uterus with no evidence of free fluid in the pelvic cavity (Figure 7). She was discharged on post-operative day 3 with a follow-up plan to do weekly serum beta hCG. Complete resolution of serum beta-hCG was achieved 2 weeks after the resection.

One year later, she conceived again spontaneously and pregnancy was followed up closely from early gestation. Cervical cerclage was inserted due to identification of low cervical volume, short length and known risk of cervical incompetency following conservative surgical management of cervical ectopic pregnancies. She presented with preterm labour in the active stage at 36 weeks and it was found that the cerclage was torn and labour was allowed to progress vaginally.

Discussion

Cervical ectopic pregnancy is a rare form of pregnancy affecting 0.01% of all pregnancies [1]. It remains a life-threatening condition even with recent advancements in diagnostic and treatment modalities.

The diagnosis of cervical ectopic is challenging and it needs to be differentiated from a possible collapsing sac in the cervical canal due to ongoing spontaneous miscarriage. Ultrasound visualization of a hourglass uterine shaped and ballooned cervical canal, gestational sac or placental tissue below the level of the internal os with a negative sliding organ sign and high peri trophoblastic vascularity (peak velocity > 20cm/s, pulsatility index <1) with an empty uterine cavity and thicken endometrium will confirm the diagnosis 2].

Our patient had high risk factors for cervical pregnancy like previous hysterotomy and dilatation and evacuation of a previous pregnancy. She had all five clinical practical criteria for the diagnosis of cervical pregnancy, described by Paalm and McElin in 1959, which includes uterine bleeding without cramping pain following a period of amenorrhea; A soft enlarged cervix equal to or larger than the fundus; Products of conception entirely confined within and firmly attached to endocervix; A close internal cervical os; A partially opened external os [4].

Early and timely diagnosis is the key to successful management of the patient. Treatment options available are surgical interventions like laparotomy and hysterectomy which is done in patient with life threatening bleeding [1]. Currently, early diagnosis allows more conservative forms of treatment like uterine artery embolization, treatment with systemic and local methotrexate, curettage with ligation of cervical branch of uterine artery and tamponade with Foley's catheter [5].

We were able to successfully manage our patient with minimally invasive surgical techniques using hystero-laparoscopy, allowing removal of pregnancy tissue under direct visualization of the ectopic pregnancy thus minimizing damage to the normal cervical tissue and allowing diathermy cauterization of bleeding points.

Operative hysteroscopy simplifies the management of cervical ectopic pregnancy management as it confirms the exact location of pregnancy, allows complete resection and bleeding can be controlled by the use of diathermy [5]. In our case, we noted that there was a rapid drop in the serum beta-hCG level following the hysteroscopic resection, with complete resolution of cervical ectopic which avoided the requirement of prolonged follow- up.

Following management of a cervical ectopic pregnancy, the patient should be informed on the potential risk of future ectopic pregnancies and spontaneous miscarriage due to possible cervical insufficiency [5]. Our patient was advised not to conceive for a one-year period and one year later, she naturally conceived and close follow up was arranged

from early gestation and she was offered cervical cerclage. At 36 weeks of gestation she presented in established labour and was allowed to progress with close monitoring of fetal and maternal condition.

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